

Patent claims

- 5        1. Device for connecting electronic components for driving an electric motor comprising:  
a lead frame having tracks for connecting the power supply wires and the phase  
windings of the electric motor, the tracks of the lead frame being adapted for direct  
electrical connection of the electronic components.
- 10       2. Device according to claim 1, wherein the tracks of the lead frame are designed for po-  
sitioning and supporting the electronic components.
3. Device according to claim 1, wherein electronic components are power transistors.
- 15       4. Device according to claim 1, wherein the lead frame has tracks for the connection with  
positive and negative power supply voltages, tracks for the connection with electrical  
motor phase windings and tracks for the connection with control pins of the electronic  
components.
5. Device according to claim 1, wherein the lead frame is of a rotationally symmetrical  
shape, and the electronic components on the lead frame (8) are arranged in a rotation-  
ally symmetrical manner.
- 20       6. Device according to claim 1, wherein the lead frame is formed essentially in a single  
plane.
7. Device according to claim 1, wherein the lead frame is formed three-dimensionally.
8. Device according to claim 1, wherein the lead frame has stamped and bent parts which  
protrude from the tracks.
- 25       9. Device according to claim 8, wherein the cross section and the structure of the lead  
frame is designed so that the lead frame dissipates heat that is generated by the elec-  
tronic components.
10. Device according to claim 1, wherein a support component is inserted between the  
lead frame and the electronic components.

11. Device according to claim 10, wherein the supporting component functions as a heat sink.

12. Electric motor comprising a device for connecting electronic components for driving the electric motor, the connecting device including: a lead frame having tracks for  
5 connecting the power supply wires and the phase windings of the electric motor, the tracks of the lead frame being adapted for direct electrical connection of the electronic components, wherein the lead frame is located at a front end of the electrical motor so that the length of the connection wires from the phase windings of the electric motor with the tracks of the lead frame is minimal.

10 13. Electrical motor according to claim 12 including a multiple-part motor housing, the motor comprising a supporting device in which the lead frame is held, the supporting device being held in the motor housing.